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10/511,659

11/17/2004

Hiroki Ishikawa

TSL 1789 US

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EXAMINER

PENG, KUO LIANG

ART UNIT

PAPER NUMBER

1712

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

03/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/511,659

Applicant(s)

ISHIKAWA ET AL.

Examiner

Kuo-Liang Peng

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/26/07 Respons/amendment.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 10-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 3 and 5-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/18/04</u> . | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> . |

Continuation of Attachment(s) 6). Other: English translations of abstracts of JP 63-115928 and JP 60-228587.

DETAILED ACTION

1. Applicant's election of the invention of Group I in the response to restriction requirement filed December 26, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The requirement is still deemed proper and is therefore made FINAL.

Group II, Claims 10-27 is withdrawn for further consideration.

2. Claims 10-27 are subsequently deleted. Now, Claims 1-9 are pending.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 3 (line 2), it is not clear as to what "Cu-Zn-Al type" refers to.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by JP928 (JP 63-115928).

JP928 discloses a curable liquid polymer composition comprising a curable liquid polymer, a Ni-Ti alloy filament (i.e., coil) or powder, a **carborundum**, an organic filler and an inorganic filler. (page 2, upper columns) Note that Ni-Ti alloy is a thermally-elongatable shape memory alloy as taught in Applicants' specification. ([0008]) Furthermore, a carborundum (i.e., **silicon carbide**) and a typical **inorganic filler** are considered as thermoconductive fillers. Especially, "thermoconductive" recited in Claim 1 is a relative term. English translation of JP928 has been requested. It will be available to Applicants later upon request.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP928 (JP 63-115928).

JP928 is silent on the specific amounts of the components. However, these amounts can affect the friction properties of the cured composition. As such, these amounts are Result-Effective variables. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize a composition with whatever amounts of the components through routine experimentation in order to obtain a composition with proper friction properties. Especially, Applicants do not show the criticality of the amounts. See MPEP 2144.05 (II).

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP928 in view of JP587 (US JP 60-228587).

JP928 discloses a curable liquid polymer composition, supra, which is incorporated herein by reference. JP928 further teaches the use of a **phenol resin** as a binder in a composition for making **brake pads**. (page 2, upper columns) JP928 is silent on the use of a curable liquid epoxy resin. However, JP587 teaches the use of **epoxy-modified phenol resin** as a binder for preparing brake pads. (page 2, upper right column to lower left column) The motivation of using the epoxy-modified phenol resin is to afford a composition for making brake pads that prevent low frequency brake noise and vibration of automobiles. (page 1, lower right column to page 2, upper left column) In light of the benefit mentioned, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize JP587's epoxy-modified phenol resin in JP928's composition. Especially, JP587 is in the same field as that of JP928's endeavor. English translation of JP587 has been requested. It will be available to Applicants later upon request.

10. Claims 1-2 and 8-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Seki (US 5 087 642) in view of JP928.

Seki discloses a composition for making brake pads, which comprises a phenol resin, a friction modifier such as alumina powder and a reinforced material such as asbestos. (col. 1, lines 8-16 and col. 1, line 52 to col. 2, line 2) The

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amounts of these components are described in col. 1, lines 46-51) Note that alumina is considered thermoconductive. Seki is silent on the use of a thermally-elongatable shape memory alloy. However, JP928 teaches replacing asbestos in a composition for preparing brake pads with Ni-Ti alloy filament (i.e., coil) or powder. The motivation is to avoid the harmful effect of the asbestos on human health and to afford a cured composition with better abrasion resistance. (page 1, lower columns to page 2, upper left column and Examples) In light of the benefit, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize Ni-Ti alloy in Seki's composition. Especially, JP928 is in the same field as that of Seki's endeavor.

11. Claim 3 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

None of the above references teaches or fairly suggests the claimed component B).

12. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the above references teaches or fairly suggests the curable liquid silicone set forth in the instant claims.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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klp
March 9, 2007


Kuo-Liang Peng
Primary Examiner
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